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BOTANICAL GARDENNEW SPECIES OF *CHIONOLAENA* AND *STENOCLINE* FROM BRAZIL

(INULEAE: ASTERACEAE).

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Recent collections of brasilian Inuleae prove to include undescribed species of two of the smaller austral genera, one from *Chionolaena* and one from *Stenocline*.

CHIONOLAENA JEFFREYI H. Robinson, sp. nov.

Plantae herbaceae perennes prostratae vel leniter ascendentes ad 20 cm longae mediocriter vel multo divaricate ramosae subcapitulo innovantes. Caules tenues teretes ad 1 mm lati dense albo-lanati dense foliosi. Folia recte patentia sensim retrorsa indistincte breviter petiolata; laminae anguste ellipticae plerumque 3-8 mm longae et 1-2 mm latae margine integrae planae base breviter cuneatae apice obtusae vix minute apiculatae supra et subtus canescentiter lanatae subtus pallidiores. Capitula in ramis solitaria abrupte terminalia 4-5 mm alta et in sicco late campanulata; squamae involucri ca. 25 scariosae plerumque subaequales 3.5-5.0 mm longae et 0.8-1.2 mm latae glabrae apice subacutae et minute crenulato-serrulatae supra basem sensim margaritaceae. Flores ca. 30 in capitulo; flores feminei ca. 8-10; corollae anguste cylindratae 2.5 mm longae, lobis plerumque ca. 5 valde inaequalibus 0.05-0.20 mm longis et 0.05-0.10 mm latae subapice minute 1-2-glanduliferis; flores hermaphroditi 20-25; corollae 3.0-3.5 mm longae, tubis et faucibus inferioribus anguste cylindratis utraque 1 mm longis; faucibus superioribus campanulatis ca. 1 mm longis, lobis triangularibus 0.4 mm longis et 0.3 mm latis subapice 1-2-glanduliferis, cellulis laxe reticulatis extus minime antrorse prorulosi; filamenta in partibus superioribus angusta ca. 0.3 mm longa et 0.04 mm lata cellulis ca. 7-seriatis; thecae antherarum in partibus fertilis 0.7 mm longae in caudicibus 0.4-0.5 mm longae grosse setuliferae; appendices antherarum anguste ovatae ca. 0.35 mm longae et ca. 0.1 mm latae; basi stylorum distincte minute noduliferi; styli in floribus femineis distaliter anguste laeviter ramosi in floribus hermaphroditis vix ramosi et distincte antrorse prorulosi. Achaenia feminei cylindrica 0.8 mm longa dense setulifera, setulis incrassatis; carpodia in cellulis basilaribus distinctis uniseriata; achaenia hermaphrodita sterilia 0.15 mm longa et superne 0.2 mm lata 1-2-setulifera, cellulis carpodii uniseriatis; setae pappi ca. 25 basi connatae 3.0-3.5 mm longae, cellulis apicalibus apice rotundatae vix latiores. Grana

pollinis in diametro ca. 25 μ m.

TYPE: BRAZIL: Bahia: Município de Rio de Contas. Pico das Almas a 18 km NW de Rio de Contas. Elevation 1600-1850 meters. Flowers white. July 24, 1979. *R. M. King, S. A. Mori, T. S. dos Santos 8141* (Holotype, RB; isotypes, CEPEC, MO, US). PARATYPE: BRAZIL: Bahia: Middle and upper N.E. slopes of the Pico das Almas ca. 25 km W.N.W. of the Vila do Rio de Contas. Sandstone conglomerate metamorphic and quartzite rock outcrop with associated scrubby vegetation with damp flushes and grassland and marsh in some areas. ca. 41°57' W, 13°33' S. Alt. 1600-1850 m. This plant growing in damp shady crevice of rock overhang on penultimate ridge below summit. Prostrate herb. Stems and leaves whitish-grey. Florets white. 19 March 1977. *R. M. Harley, S. J. Mayo, R. M. Storr, T. S. Santos & R. S. Pinheiro 19677* (CEPEC, K, US).

Chionolaena jeffreyi seems to be the only representative of the genus in Bahia. Other Brazilian species occur in Minas Gerais or in adjacent Rio de Janeiro. The new species is one of those having solitary terminal heads with resulting divaricating subfloral innovations and having sterile achenes in the disk flowers. The species is distinguished from its apparent closest relatives by its more herbaceous prostrate habit and by its small essentially flat leaves that are pubescent on both surfaces. The number of female flowers in the heads seems much less than in the related *C. arbuscula* DC. and *C. lychnophoroides* Sch.Bip., rather suicidally few considering that they are the only flowers in the heads producing fertile achenes. Other species with so few female flowers that have been placed in the genus seem to have fully bisexual disk flowers.

The species is named for Charles Jeffrey of Kew who made the initial determination as a *Chionolaena*.

STENOCLINE HERINGERI H. Robinson, sp. nov.

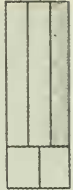
Plantae herbaceae perennes erectae ca. 5 dm altae paucis ascendenter ramosae. Caulis teretes cinereo-lanatae inferne sensim fulviores. Folia alterna superne decrescentia inferiores oblanceolata ad 8 cm longa et 0.8 cm lata non decurrentia apice acuta longitudinaliter trinervata superiores 1.5-2.0 cm longa linearia 1.5-2.0 mm lata supra sparse lanata subtus dense albo-at flavo-tomentosa. Inflorescentiae plerumque terminales in ramis dense corymbosae, ramis dense tomentosis vel lanatis. Capitula cylindrica 6-7 mm alta et ca. 3 mm lata; squamae involucri ca. 15 plerumque subaequales 5-6 mm longae 1.5-1.8 mm latae base ad medio virides extus lanatae superne margaritaceae glabrae apice breviter vel anguste acutae extus distaliter subtiliter carinatae. Flores ca. 5 in capitulo omnino hermaphroditici; corollae tubiformes superne leniter infundibulares ca. 4 mm longae, tubis ca. 1 mm longis et faucibus ca. 2.5 mm longis extus glabris, lobis triangularibus ca. 0.6 mm longis et 0.3 mm latis extus multo glanduliferis raro 1-2-arachnoideo-piliferis,

cellulis linearibus; filamenta in partibus superioribus ca. 0.2 mm longa inferne ad 0.9 mm lata, cellulis plerumque subquadratis vel breviter oblongis ca. 9-seriatis; thecae antherarum in partibus fertilis ca. 1.1 mm longae in caudicibus ca. 0.5 mm longae multo setulo-fimbriatae; appendices antherarum ovato-triangulares ca. 0.3 mm longae et 0.13 mm latae; basi stylorum distincte incrassati subnodulosi, rami stylorum laeves apice subtruncati breviter fimbriati. Achaenia submatura ca. 0.7 mm longa glabra; carpodia lata, cellulis multiseriatis in seriebus unicis basilaribus scleroideis; setae pappi capillaceis ca. 25 facile deciduae ca. 3.5 mm longae base angustiores minute patentiter denticulatae apice leniter latiores, cellulis apicalibus apice rotundatis. Grana pollinis in diametro ca. 25 μ m.

TYPE: BRAZIL: Distrito Federal: Bacia do Rio São Bartolomeu. Erva com pubescência esbranquiçada; capítulos amarelados; campo. 15.VI.1981. E. P. Heringer, T. S. Filgueiras, R. C. Mendonça & B. A. S. Pereira 7055 (Holotype, IBGE; isotype, US).

Stenocline heringeri is the fourth Brazilian species of this small austral genus notable among the Gnaphaliinae for its lack or near lack of female flowers. The new species has neither the broad sessile leaves of *S. chionaea* DC. of Minas Gerais and *S. eriodes* Mattf. of Bahia or the narrowly oblong to linear leaves of *S. gardneri* Baker of Minas Gerais and Bahia. The new species also has less broadly branched inflorescences and more sharply pointed outer involucre bracts than the other three previously described species. *Stenocline heringeri* actually resembles most closely material named as *Achyrocline saturoides* DC. from Paraguay and *A. tomentosa* Rusby and related species from Bolivia and northern Argentina in the broadly oblanceolate leaves, but the latter have more broadly branching inflorescences and have the heads with mostly female flowers that are characteristic of that genus.

The species is named for E. P. Heringer of the Instituto Brasileiro de Geografia e Estatística.



ASTERACEAE of BAHIA, BRAZIL

Cytological and/or Biochemical Vouchers

No 8141 *Chionolaena jeffreyi* Robinson

Município de Rio de Contas, Pico das Almas a 18 km NW de Rio de Contas
Elevation 1600-1850 meters

Flowers white.

Robert M. King, Scott A. Mori, T. S. Whitton
& J. L. Hoge

Specimens collected in the United States, National Herbarium and Herbario
Centro de Pesquisas de Cacau at Bahiana

Chionolaena jeffreyi H. Robinson, Holotype, Jardim Botânica, Rio de Janeiro. Photos by Victor E. Krantz, Staff Photographer, National Museum of Natural History.



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 HERBÁRIO DA RESERVA ECOLÓGICA DO IBGE

Brasília - DF Brasil
 Compositae

Stenocline heringeri, H. Robinson

Brasília DF, Póla do Rio São Bartolomeu.
 Erva com pubescência esbranquiçada; capítulos
 amarelados; campo.

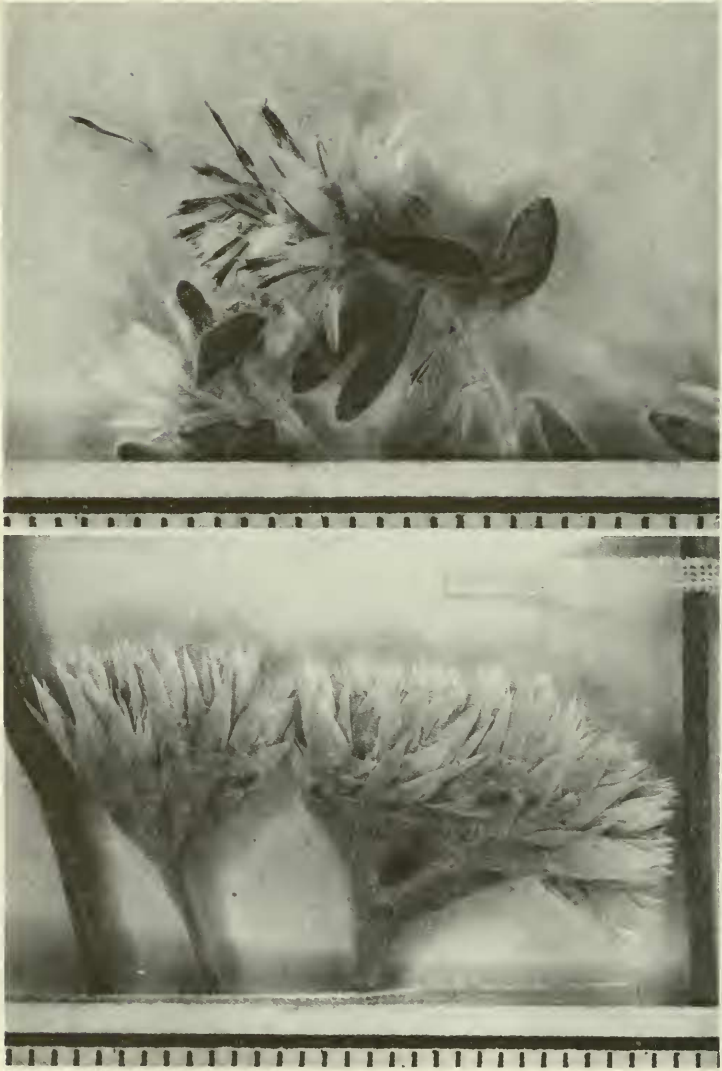
7055 15.VI.1977
 LEO E. F. NEUNGER Y S. PROENÇA & C. FERREIRA & S. A. S. PEREIRA

UNITED STATES

2950169

NATIONAL HERBARIUM

Stenocline heringeri H. Robinson, isotype, United States National Herbarium.



Enlargements of head. Top. *Chionolaena jeffreyi*. Bottom. *Stenocline heringeri*.